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| EXAMINER |
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CHANG, RICHARD

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| ART UNIT | PAPER NUMBER |
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2616

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|----------------------------------------|------------|---------------|
| 3 MONTHS | 02/22/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary

Application No.

09/806,594

Applicant(s)

WEHREND ET AL.

Examiner

Richard Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/21/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment and Argument

1. Applicant's arguments and amendments, filed on 11/21/2006, with respect to claims 7 and 9-12 have been fully considered but are moot in view of the new ground(s) of rejection.

Claims 1-6 and 8 had been canceled.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7 and 9-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding to Claim 7, the claim is vague and indefinite because the limitation "on the basis of substrate elements" (See line 3, the newly amended claim 7) is not clearly defined in the claim nor in the disclosed specification, thus is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,404,765 ("Bernstein et al.") in view of US patent No. 5,764,645 ("Bernet et al.") and further in view of US patent No. 6,041,054 ("Westberg").

Regarding claim 7, Bernstein et al. teach a method and system for connecting exchanges (110-118, access devices) via a packet-oriented communication network (180 ATM network), wherein data transmission involves data packets (DS-X traffic packets, See Fig. 6B) and the connecting exchanges (110-118, access devices) are connected to the packet-oriented communication network (180) via a respective conversion device (100, access MUX device) (See Fig. 1), the method comprising of transmitting, via a transmitting one of the connecting exchanges (110, access device) data (DS-X traffic packets) to be transmitted as substructure elements (within ATM cells) to an associated transmitting conversion device (100, access MUX device) (See Fig. 1, Col. 5, lines 50-55),

inserting, via the transmitting conversion device (210, ATM conversion circuit), the substructure elements (within ATM cells) into data packets unchanged (See Fig. 2, Col. 6, lines 3-8),

extracting, via a receiving conversion device (210, ATM conversion circuit) associated with a receiving one of the connecting exchanges (110, access device), the substructure elements from the received data packets (within ATM cells) (See Fig. 2, Col. 6, lines 1-2), and

forwarding, via the receiving conversion device 210, ATM conversion circuit), the extracted substructure elements to the receiving one of the connecting exchanges (110, access device) unchanged (See Fig. 1, Col. 5, lines 50-55).

Bernstein et al. teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of "Internet Protocol data packet over ATM network".

Bernet et al. teaches a fundamental method for transmitting Internet Protocol data packet over connection-oriented ATM network by efficiently adapting the Internet Protocol layer over ATM layer to achieve a common practice as Internet Protocol is over ATM network (See Fig. 5, Col. 3, lines 25-33).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Bernet et al. with Bernstein et al. in order to obtain a method for connecting access devices via a general Internet Protocol type packet-oriented communication network and to take advantage of transmitting Internet Protocol data packet over connection-oriented ATM network by efficiently adapting the Internet Protocol layer over ATM layer to achieve an Internet Protocol is over ATM network.

The motivation to do so would have been to efficiently adapt the Internet Protocol layer over ATM layer to achieve an Internet Protocol is over ATM network, as suggested by Bernet et al. in Col. 3, lines 25-33.

Bernstein et al. and Bernet et al. teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

“providing that each of the substructure elements include both a cell header and a useful data area, and

“the substructure elements may be inserted into the data packets in an arbitrary order”.

Westberg teaches a method for data transmission involved IP (internet protocol) over the ATM (asynchronous transfer mode) type packet-switching network wherein the traffic packets, such as delay-sensitive voice-type data (which is independent of being compressed or decompressed) may be further subdivided into the AAL2 mini packets inside the ATM cells to be adapted to IP type data packet transmission (102 as IP over ATM transmission) (See Fig. 1, Col. 2, lines 43-50) comprising of

providing that each of the segmented mini packets (205, AAL2 mini packets within ATM cells) include both a cell header (302) and a useful data area (302, payload) (See Fig. 2 and Fig. 3, Col. 1, lines 30-56), and

the mini packets (205, AAL2 mini packets) may be inserted into the data packets (210, ATM cell) in an arbitrary order (See Fig. 2, Col. 1, lines 30-42).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Westberg with Bernstein et al. and Bernet et al. in order to obtain a method for connecting access devices via a Internet Protocol type packet switching communication network wherein data traffic packets subdivided into mini packets and to take advantage of subdividing data traffic packets into the AAL2 mini packets within the ATM cells in arbitrary order wherein each AAL2 mini packet

within ATM cell includes both a cell header and a payload to be adapted to IP type data packet transmission.

The motivation to do so would have been to subdivide data traffic packets into the AAL2 mini packets within the ATM cells in arbitrary order wherein each AAL2 mini packet within ATM cell includes both a cell header and a payload to be adapted to IP type data packet transmission, as suggested by Westberg in Col. 1, lines 30-56.

Regarding claim 9, as discussed above, Westberg further teaches the steps of storing, via a respective cell header (302) of a substructure element (301), a channel identifier (304, CID) for denoting assignment of the substructure elements (301 AAL2 mini packet) to a transmission destination, and

storing, via the respective cell header (302), an item of length information (305, Length) for indicating a number of useful data segments transmitted in the substructure element (301 AAL2 mini packet) (See Fig. 3, Col. 1, Lines 43-55).

Regarding claim 10, as discussed above, Westberg further teaches that the substructure elements are structured on the basis of an Asynchronous Transfer Mode data format in accordance with an agreement known as second ATM adaptation layer AAL Type 2 (See Col. 3, lines 5-15).

6. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,404,765 ("Bernstein et al.") in view of US patent No. 5,764,645 ("Bernet et al.") and US patent No. 6,041,054 ("Westberg") and further in view of US patent No. 6,229,821 B1 ("Bharucha et al.").

Regarding claim 11-12, as discussed above, Bernstein et al. and Bernet et al. and Westberg teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

“the substructure elements are arranged in a useful data area of a data packet such that a substructure element starts in a segment defined as first useful data segment of the data packet”, and

“defining a pointer, in a segment defined as first useful data segment of an Internet Protocol data packet, which is used to denote a start address of a first substructure element situated in a useful data area of the Internet Protocol data packet”.

Bharucha et al. teach an advanced method for utilizing the AAL2 mini packets inside the ATM cell/frame (See Fig. 2) for

the substructure elements (36, 37 ... AAL2 mini packets) are arranged in a useful data area (ATM payload data area) of a data packet (30 ATM cell) such that a substructure element (AAL2 mini packet) starts in a segment (36) defined as first useful data segment (1st AAL2 mini packet) of the data packet (30) (See Fig. 3 and Fig. 4, Col. 2, lines 28-43), and

defining a pointer (34 MSP), in a segment (31) defined as first useful data segment of an Internet Protocol data packet, which is used to denote a start address of a first substructure element (AAL2 mini packet) situated in a useful data area of the Internet Protocol data packet as IP over ATM (See Fig. 4, Col. 2, lines 33-43).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Bharucha et al. with Bernstein et al. and Bernet et

al. and Westberg in order to obtain a method for connecting access devices via a packet-oriented communication network wherein data traffic packets subdivided into AAL2 mini packets within ATM cells via a respective conversion device and to take advantage of arranging the 1st AAL2 mini packets in a useful ATM payload data area and further defining a MSP pointer to denote a start address of a first mini packet situated in a useful data area of the Internet Protocol data packet as IP over ATM.

The motivation to do so would have been to arrange the 1st AAL2 mini packets in a useful ATM payload data area and to further define a MSP pointer to denote a start address of a first mini packet situated in a useful data area of the Internet Protocol data packet as IP over ATM, as suggested by Bharucha et al. in Col. 2, lines 28-43.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is (571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RM

rkc

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